



# **CONNECTION ASSESSMENT & APPROVAL PROCESS**

## **ASSESSMENT SUMMARY**

**Applicant: Hydro One Networks Inc.**

**Project: Porcupine TS  
Replace 230kV Oil Breaker T7L91 (2002 –  
EX107) and Refurbish/Replace 500kV  
Breaker Disconnect Switches (2002 –  
EX113)**

**CAA ID: 2002 – EX107 and 2002 – EX113**

**Long Term Forecasts & Assessments Department  
Consistent Information Set Department**

**Date: February 11, 2003**



**Porcupine TS: Replace 230kV Oil Breaker T7L91 (2002 – EX107) and  
Refurbish/Replace 500kV Breaker Disconnect Switches (2002 – EX113)**

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The technical specifications for the new disconnect switches and the new SF<sub>6</sub> breaker are as follows:

Disconnect Switches

Manufacturer:	GS T&D Products Limited
Nominal Voltage:	500kV
Maximum Voltage:	550kV
Continuous Current:	4,000A
Momentary Current:	160kA

SF<sub>6</sub> Breaker

Manufacturer:	ABB
Model:	242-PGM
Nominal Voltage:	242kV
Maximum Voltage:	250kV
Continuous Current:	3,000A
Interrupting Capability:	63kA
Interrupting Time:	2 cycles

## 2.0 Assessment

The 500kV breaker disconnect switches are for isolating the 500kV circuit breakers. The switches that are to be refurbished are rated 2,000A continuous, while the new switches are rated 4,000A continuous. These switches have ratings that either match or are better than the continuous rating of the 500kV breakers.

The 500kV transformer disconnect switches will be refurbished and there are no other changes proposed. The switch refurbishment is intended to extend the operating life of existing facilities and would not have any impact on the IMO-controlled grid.

A new SF<sub>6</sub> breaker with higher rating will replace the existing 230kV 2,000A oil breaker and will be adequate for the protection and switching of the 216/288/360MVA 480-230-28kV autotransformer T7. There will be no change to the existing transformer protection scheme.

The proposal is essentially a like-for-like replacement of existing facilities and would have no adverse impact on the IMO-controlled grid.

## 3.0 Notification of Approval

Based on the above assessment, it is recommended that a Notification of Approval for this proposal be issued to the applicant.